

PROVISIONAL ANSWER KEY

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Question1:-Which of the following statements are correct about DIVIDERS?

- (i) Dividing curved or straight lines into any number of equal parts.
- (ii) Transforming dimensions from one part of the drawing into another part
- (iii) Setting dimensions from the scale to the drawings.

A:-Only (i & iii)

B:-Only (ii & iii)

C:-Only (i & ii)

D:-All of the above (i, ii & iii)

Correct Answer:- Option-D

Question2:-What is the Trimmed size of an A3 Drawing sheet in mm?

A:-625 × 880

B:-297 × 420

C:-420 × 594

D:-210 × 297

Correct Answer:- Option-B

Question3:-Which of the following is the hardest pencil?

A:-HB

B:-H

C:-2H

D:-9H

Correct Answer:- Option-D

Question4:-What is the name of an angle greater than 180 degree?

A:-Acute angle

B:-Right angle

C:-Obtuse angle

D:-Reflex angle

Correct Answer:- Option-D

Question5:-What is the part of a circle bounded by an arc and its chord called?

A:-Segment of the circle

B:-Sector of the circle

C:-Arc

D:-Diameter of circle

Correct Answer:- Option-A

Question6:-What is the angle of inclination towards right side in Italic Lettering?

A:-15 degree

B:-30 degree

C:-60 degree

D:-45 degree

Correct Answer:- Option-A

Question7:-What is the Eccentricity of an ellipse?

A:-Greater than One

B:-Less than One

C:-Equal to One

D:-Zero

Correct Answer:- Option-B

Question8:-What are two or more circles with a common center called?

A:-Eccentric circles

B:-Semicircle

C:-Concentric circles

D:-Involute

Correct Answer:- Option-C

Question9:-Which of the following DIMENSIONS is essential to the function of the component or space?

A:-Functional dimension

B:-Non-functional dimension

C:-Auxiliary or Reference dimension

D:-Chain dimension

Correct Answer:- Option-A

Question10:-Which of the following is the recommended method of dimensioning a sphere with a diameter 80 mm?

A:- $\phi 80$ S

B:-80 ϕ S

C:-S80 ϕ

D:-S ϕ 80

Correct Answer:- Option-D

Question11:-If the actual length of a room is 5 m and is represented by a 25 mm length on a drawing, What is the R.F (Representative Fraction)?

A:-1:20

B:-1:200

C:-1:2000

D:-1:20000

Correct Answer:- Option-B

Question12:-In an isometric projection, What is the angle between any two of the three isometric axes?

- A:-60 degree
- B:-45 degree
- C:-120 degree
- D:-180 degree

Correct Answer:- Option-C

Question13:-Which of the following method is used for the development of a cylinder?

- A:-Radial line method
- B:-Triangulation method
- C:-Approximate method
- D:-Parallel line method

Correct Answer:- Option-D

Question14:-How is a cutting planes represented in an Engineering Drawing?

- A:-Continuous thick line
- B:-Chain line
- C:-Chain thin, thick at ends and changes of direction
- D:-Continuous thin freehand

Correct Answer:- Option-C

Question15:-In the First angle projection method, Which of the following statements are CORRECT regarding the position of the views?

- (i) The Left hand side view is projected to the Right of the Front view
- (ii) The Left hand side view is projected to the left of the Front view
- (iii) The Top view is placed directly below the Front view
- (iv) The Top view is placed directly above the Front view

- A:-Only (i & iii)
- B:-Only (i & iv)
- C:-Only (ii & iii D)

D:-Only (ii & iv)

Correct Answer:- Option-A

Question16:-Which is the property of a materials to resist scratching, abrasion, or penetration?

A:-Brittleness

B:-Hardness

C:-Toughness

D:-Malleability

Correct Answer:- Option-B

Question17:-What is the Ore of Aluminium?

A:-Hematite

B:-Calamine

C:-Malachite

D:-Bauxite

Correct Answer:- Option-D

Question18:-The surface that connects crest and root of a screw thread is

A:-Root

B:-Flank

C:-Crest

D:-Pitch

Correct Answer:- Option-B

Question19:-Which method is not used to join two parts permanently?

A:-Rivet

B:-Welding

C:-Screwed Bolt

D:-Brazing

Correct Answer:- Option-C

Question20:-Which of the following is used to cut internal threads in metals

A:-Tap

B:-Die

C:-Reamer

D:-Screw Driver

Correct Answer:- Option-A

Question21:-Which tool is used in a foundry to smooth over or finish moulding sand surfaces?

A:-Rammer

B:-Lifter

C:-Bellows

D:-Trowel

Correct Answer:- Option-D

Question22:-What is the unit of electric power?

A:-Volt

B:-Ohm

C:-Ampere

D:-Watt

Correct Answer:- Option-D

Question23:-What is used in mass production to hold the workpiece accurately?

A:-Fixture

B:-Jig

C:-Vice

D:-Clamp

Correct Answer:- Option-A

Question24:-Which of the following is not an Internal Combustion (IC) engine?

A:-Steam Engine

B:-Diesel engine

C:-Petrol engine

D:-None of these

Correct Answer:- Option-A

Question25:-What is known as the difference between the maximum limit of size and the minimum limit of size of a component?

A:-Deviation

B:-Allowance

C:-Fit

D:-Tolerance

Correct Answer:- Option-D

Question26:-Which fastener is used to prevent nuts from loosening by themselves in areas prone to vibrations?

A:-Wing Nut

B:-Castle Nut

C:-Flange Nut

D:-Thumb Nut

Correct Answer:- Option-B

Question27:-What is the fitting hand tool 'Scraper' primarily used for?

A:-Layout marking

B:-Removing high spots to achieve high flatness accuracy

C:-Metal cutting

D:-Thread cutting

Correct Answer:- Option-B

Question28:-Which device is used to support long workpieces on a lathe while turning?

A:-Face Plate

B:-Mandrel

C:-Steady Rest

D:-Dog Clutch

Correct Answer:- Option-C

Question29:-Which instrument is used to measure the value of resistance directly?

A:-Ammeter

B:-Voltmeter

C:-Ohmmeter

D:-Wattmeter

Correct Answer:- Option-C

Question30:-How is the high temperature required for combustion achieved in a diesel engine?

A:-By a carburetor

B:-By high compression of air

C:-By a pre-heater

D:-By a spark plug

Correct Answer:- Option-B

Question31:-Which standard limit system is followed in India to achieve mass production standardization?

A:-ISO System

B:-BIS System

C:-ISI System

D:-ASA System

Correct Answer:- Option-B

Question32:-What happens to the weight of an object when it is taken from the Earth to the Moon?

A:-It decreases

B:-It increases

C:-It remains the same

D:-It becomes zero

Correct Answer:- Option-A

Question33:-Which operation is performed on a riveted joint to make it leak-proof by pressing the plate edges down?

A:-Peening

B:-Caulking

C:-Swaging

D:-Drawing

Correct Answer:- Option-B

Question34:-Which foundation bolt has a jagged or tapered body that is fixed into concrete foundations using molten lead for heavy structural installations?

A:-Eye Foundation Bolt

B:-Rag Foundation Bolt

C:-T-Bolt

D:-Square Head Bolt

Correct Answer:- Option-B

Question35:-What type of joint failure occurs if the pitch of the rivets is too small in a riveted structure?

A:-Tearing of plate between rivets

B:-Shearing of rivet

C:-Crushing of rivet

D:-Splitting

Correct Answer:- Option-A

Question36:-Which special scale is used by a pattern maker in foundry shops to compensate for the contraction of cast iron during cooling?

A:-Steel Rule

B:-Shrink Rule

C:-Vernier Caliper

D:-Meter Tape

Correct Answer:- Option-B

Question37:-What is the primary reasons why the thermal efficiency of a 4-stroke Diesel engine is higher than that of a Petrol engine?

A:-Higher operational speed

B:-Higher Compression Ratio

C:-Absence of a carburetor

D:-Lightweight pistons

Correct Answer:- Option-B

Question38:-Which type key is especially useful for tapered fitting of shaft?

A:-Circular taper key

B:-Gib head key

C:-Hollow saddle key

D:-Woodruff key

Correct Answer:- Option-D

Question39:-Which statement is correct?

1. Connecting rod big end bearings are shell bearing
2. Connecting rod big end bearings are bush bearing
3. Connecting rod small end bearings are bush bearing
4. Connecting rod big end bearings are needle bearing

A:-Statement both 1 and 3

B:-Statement 1 only

C:-Statement 2 only

D:-Statement both 3 and 4

Correct Answer:- Option-A

Question40:-A shaft is an integral part of the machine is called

A:-Transmission shaft

B:-Prime mover shaft

C:-Machine shaft

D:-Spindle shaft

Correct Answer:- Option-C

Question41:-Which coupling is suitable to connect two parallel offset shaft?

A:-Spider coupling

B:-Old hams coupling

C:-Muff coupling

D:-Flange coupling

Correct Answer:- Option-B

Question42:-Which statement is correct?

1. Straight spur gears used in sliding mesh gear box
2. Helical gears used in synchromesh gear box
3. Worm and wheel type gear is used in differential unit
4. Rack and pinion mechanism used in steering gear box

A:-Statement both 1 and 2

B:-Statement 1, 2 and 3

C:-Statement 1, 2 and 4

D:-Statement both 2 and 4

Correct Answer:- Option-C

Question43:-Which type belt drive mechanism driver and driven pulleys will rotate in opposite direction?

A:-Cross belt drive

B:-Open belt drive

C:-Quarter turn belt drive

D:-Compound belt drive

Correct Answer:- Option-A

Question44:-Inverted tooth chain is especially used for which purpose?

A:-Hoisting and hauling

B:-Conveying

C:-Both 1 and 2

D:-High speed power transmission

Correct Answer:- Option-D

Question45:-Which statement is correct?

1. Slip is the relative motion between the belt and the pulley surface
2. Creep is the phenomenon caused by the elastic property of the belt material
3. Belt slip is expressed in percentage
4. All of the above

A:-Statement 1 only

B:-Statement 4 only

C:-Statement both 1 and 3

D:-Statement 3 only

Correct Answer:- Option-B

Question46:-What is the process of shaping a pulley's face so it is slightly convex or thicker in the centre and tapers toward the edges?

A:-Jockey pulley

B:-Creep

C:-Crowning

D:-Fillet

Correct Answer:- Option-C

Question47:-What is spread in shell bearing?

A:-Diameter of shell bearing is slightly smaller than parent bore

B:-One end of the shell bearing projects from parent bore

C:-Both end of the shell bearing projects from parent bore

D:-Diameter of shell bearing is slightly larger than parent bore

Correct Answer:- Option-D

Question48:-Which is physically defined as Power?

A:-Work done
Time

B:-Force applied
Time

C:-Work done $\times$ Time taken

D:-Force applied $\times$ Time

Correct Answer:- Option-A

Question49:-What is the value of one metric horse power?

A:-736 Watt

B:-735.5 Watt

C:-735 Watt

D:-746 Watt

Correct Answer:- Option-B

Question50:-What is convection?

A:-Heat transfer through vacuum

B:-Heat transfer through metals

C:-Heat transfer through ceramic

D:-Heat transfer through fluids

Correct Answer:- Option-D

Question51:-What is 0° celsius is equal to in Kelvin?

A:-275 K

B:-273 K

C:-273 K

D:-276 K

Correct Answer:- Option-B

Question52:-Which valve is commonly used to prevent the reverse flow of fluid in a pipeline?

A:-Gate Valve

B:-Globe Valve

C:-Check Valve

D:-Needle Valve

Correct Answer:- Option-C

Question53:-What is the primary function of a follower in a cam and follower mechanism?

A:-To drive the cam

B:-To transmit motion from the cam

C:-To increase speed

D:-To store energy

Correct Answer:- Option-B

Question54:-Which type of pump is most commonly used for lifting water from wells?

A:-Centrifugal Pump

B:-Gear Pump

C:-Diaphragm Pump

D:-Screw Pump

Correct Answer:- Option-A

Question55:-What is the main purpose of a boiler in a steam power plant?

A:-To condense steam

B:-To generate steam

C:-To cool water

D:-To filter steam

Correct Answer:- Option-B

Question56:-Which boiler mounting is used to indicate the water level inside a boiler?

A:-Pressure Gauge

B:-Fusible Plug

C:-Water Level Indicator

D:-Stop Valve

Correct Answer:- Option-C

Question57:-Which law states that pressure applied to a confined fluid is transmitted equally in all directions?

A:-Boyle's Law

B:-Charles' Law

C:-Pascal's Law

D:-Bernoulli's Law

Correct Answer:- Option-C

Question58:-What is the primary purpose of a pressure vessel?

A:-To store electrical energy

B:-To contain fluids under pressure

C:-To filter liquids

D:-To measure flow rate

Correct Answer:- Option-B

Question59:-Which pneumatic component is primarily used to convert compressed air energy into mechanical motion?

A:-Compressor

B:-Air Receiver

C:-Pneumatic Cylinder

D:-Filter Regulator

Correct Answer:- Option-C

Question60:-Which fitting is used to connect two pipes of different diameters?

A:-Elbow

B:-Tee

C:-Coupling

D:-Reducer

Correct Answer:- Option-D

Question61:-What is the function of a super heater in a boiler system?

A:-To reduce steam temperature

B:-To increase steam pressure only

C:-To convert water into steam

D:-To increase the temperature of steam above saturation temperature

Correct Answer:- Option-D

Question62:-Which one of the following polygon contains equilateral triangle?

A:-Hexagon

B:-Square

C:-Heptagon

D:-Octagon

Correct Answer:- Option-A

Question63:-Longest chord in a circle is called

A:-Radius

B:-Diameter

C:-Area

D:-Perimeter

Correct Answer:- Option-B

Question64:-Area of right angled triangle?

A:-bh

B:- $\frac{1}{2}bh$

C:-b-h

D:-b+h

Correct Answer:- Option-B

Question65:-Which type of quadrilateral has all sides and all diagonals are equal?

A:-Rectangle

B:-Rhombus

C:-Square

D:-Parallelogram

Correct Answer:- Option-C

Question66:-In a simple machine, the ratio of load to the effort is called?

A:-Mechanical advantage

B:-Velocity ratio

C:-Efficiency

D:-Factor of safety

Correct Answer:- Option-A

Question67:-Which is the example of third order lever?

A:-Wheel barrow

B:-Common balance

C:-Lemmon squeezer

D:-Human force arm

Correct Answer:- Option-D

Question68:-The ratio of distance moved by effort to the distance moved by load?

A:-Efficiency

B:-Velocity ratio

C:-Mechanical advantage

D:-Distance

Correct Answer:- Option-B

Question69:-The unit of velocity ratio is

A:-Kg

B:-NM-meter

C:-Meter

D:-No unit

Correct Answer:- Option-D

Question70:-The value of Cos 60°?

A:- $\sqrt{3}/2$

B:-1/2

C:- $\sqrt{3}$

D:- $1/\sqrt{3}$

Correct Answer:- Option-B

Question71:- $\frac{\sin\theta}{\cos\theta} = ?$

A:-tan θ

B:-cot θ

C:-cosec θ

D:-cos θ

Correct Answer:- Option-A

Question72:-

Which one of the following acts in between the road and wheels if vehicles are able to run on roads?

A:-Corrosion

B:-Friction

C:-Erosion

D:-Motion

Correct Answer:- Option-B

Question73:-Which force is directly proportional to the normal reaction between the contacting surfaces?

A:-Pulling force

B:-Pushing force

C:-Frictional force

D:-Allied force

Correct Answer:- Option-C

Question74:-What is the name of the point at which all the weight of the body concentrated?

A:-Initial point

B:-Centre of gravity

C:-Centroid

D:-Central point

Correct Answer:- Option-B

Question75:- $2a + 5 = 7$, then the value of a ?

A:-6

B:-17.5

C:-21

D:-1

Correct Answer:- Option-D

Question76:- $(a + b)^2 = ?$

A:- $a^2 + b^2 + 2ab$

B:- $a^2 + b^2 - 2ab$

C:- $b^2 + a^2 + 2ab$

D:- $a^2 + 2a^2 + b^2$

Correct Answer:- Question Cancelled

Question77:-The internal opposite force to the external loading per unit area is known as?

A:-Stress

B:-Strain

C:-Poisson's ratio

D:-Velocity

Correct Answer:- Option-A

Question78:-The ratio of lateral strain to the lenier strain?

A:-Volumetric strain

B:-Poisson's ratio

C:-Volumetric stress

D:-Young's modulus

Correct Answer:- Option-B

Question79:-In which one of the following Heat treatment process, Hyper eutectoid steel is heated above Upper critical Temperature?

A:-Annealing

B:-Hardening

C:-Tempering

D:-Normalizing

Correct Answer:- Option-D

Question80:-What is the lower critical temperature of Eutectoid steel?

A:-723°C

B:-915°C

C:-1125°C

D:-1550°C

Correct Answer:- Option-A

Question81:-Which one of the following is the structure of steel having zero percentage of carbon?

A:-Cementite

B:-Ferrite

C:-Pearlite

D:-Martensite

Correct Answer:- Option-B

Question82:-Which one of the following gas is used in Gas Nitriding process?

A:-Nitrogen

B:-Ammonia

C:-Acetylene

D:-Oxygen

Correct Answer:- Option-B

Question83:-Which one of the following heat treatment process is suitable for surface hardening of small components in mass production?

A:-Flame hardening

B:-Annealing

C:-Induction Hardening

D:-Nitriding

Correct Answer:- Option-C

Question84:-Which of the following is a primary memory?

A:-HARD DISC

B:-PEN DRIVE

C:-RAM

D:-CD-ROM

Correct Answer:- Option-C

Question85:-Which technology was used in first generation of computers?

A:-Transistors

B:-Vacuum tubes

C:-Microprocessors

D:-Integrated circuits

Correct Answer:- Option-B

Question86:-What are the three components of a CAD package?

A:-

Input Output Storage

B:-

Hardware Software Firmware

C:-

Design Analysis Visualization

D:-

CPU MONITOR KEYBOARD

Correct Answer:- Option-C

Question87:-In AUTOCAD, the TTR option in circle command stands for what?

A:-Three, Two, Radius

B:-Total, Tangent, Radius

C:-Tangent, Tangent, Radius

D:-Three, Tangent, Radius

Correct Answer:- Option-C

Question88:-How the polar co-ordinate format is written in AUTOCAD?

A:-X,Y

B:-@X,Y

C:-#X+Y

D:-\$X-Y

Correct Answer:- Option-B

Question89:-Which command is used to create a new object at a specified distance from an existing object or through a specified point?

A:-ROTATE

B:-EXTEND

C:-ERASE

D:-OFFSET

Correct Answer:- Option-D

Question90:-Which short cut key is used to toggle Command line in AUTOCAD?

A:-Ctrl+9

B:-Ctrl+8

C:-Ctrl+7

D:-Ctrl+6

Correct Answer:- Option-A

Question91:-Which short cut key is used to toggle Polar mode in AUTOCAD?

A:-F9

B:-F10

C:-F11

D:-F6

Correct Answer:- Option-A

Question92:-Which of the following is NOT a type of 3D modeling?

A:-Solid modeling

B:-Surface modeling

C:-Plan modeling

D:-Mesh mode

Correct Answer:- Option-C

Question93:-What is Mesh modeling?

A:-Showing shape using only lines

B:-Only a 2D drawing method

C:-Creating a 3D shape using vertices, edges and faces

D:-Colour rendering technique

Correct Answer:- Option-C

Question94:-A bicycle marked at Rs. 1,500 is sold for Rs. 1,350. What is the percentage of discount?

A:-10%

B:-15%

C:-10.5%

D:-5%

Correct Answer:- Option-A

Question95:-The price, at which an article purchased is called?

A:-Selling price

B:-Cost price

C:-Profit

D:-Loss

Correct Answer:- Option-B

Question96:-A fruit seller bought 8 boxes of grapes at Rs.150 each. One box Was damaged. He sold the remaining boxes at Rs.190 each. Find the profit?

A:-Rs. 150

B:-Rs. 190

C:-Rs. 130

D:-Rs. 40

Correct Answer:- Option-C

Question97:-The method of calculating the various quantities and the expenditure to be incurred on a particular job or process is called?

A:-Price catalogue

B:-Shedule of labour rate

C:-Costing

D:-Estimation

Correct Answer:- Option-D

Question98:-What is the total volume of M.S rod of dia 50 mm and length 500 mm?

A:-981.875 cm³

B:-981.875 mm³

C:-981875 cm³

D:-981.875 m³

Correct Answer:- Option-A

Question99:-What is the native file extension of sketchUp projects?

A:-.dwg

B:-.dxf

C:-.pdf

D:-.skp

Correct Answer:- Option-D

Question100:-Which tool is used to rotate the viewing angle in the 3D space?

A:-PAN TOOL

B:-ROTATE TOOL

C:-ORBIT TOOL

D:-ZOOM TOOL

Correct Answer:- Option-C